

**To:** McGrath, Shaun[McGrath.Shaun@epa.gov]  
**From:** Gwen Lachelt  
**Sent:** Thur 8/27/2015 5:37:46 PM  
**Subject:** Re: EPA Releases Additional Data and Public Records on Gold King Mine Response

Thanks Shaun. I did receive it.

On Aug 27, 2015, at 8:20 AM, McGrath, Shaun <[McGrath.Shaun@epa.gov](mailto:McGrath.Shaun@epa.gov)> wrote:

Good morning Commissioner,

I wanted to make sure you saw this...

Shaun McGrath

Regional Administrator

EPA, Region 8

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Denver, CO 80202

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**From:** Russo, Rebecca  
**Sent:** Thursday, August 27, 2015 8:13 AM  
**Subject:** EPA Releases Additional Data and Public Records on Gold King Mine Response

Hi all,

Today, EPA is releasing new data trend graphs and additional public records on the Gold King Mine response, including a contractor's Draft Technical Memo of the August 5 incident, including photographs, an EPA On Scene Coordinator's description of the events depicted in the photographs, and an EPA phone duty officer's memorandum to the file about the incident and

certain subsequent events. To view the documents please go to:  
<http://www2.epa.gov/goldkingmine/gold-king-mine-chronology>

The 96 graphs will show the trending concentrations of arsenic, cadmium, lead and mercury in surface water at the 24 sampling locations where five or more samples have been collected. EPA did not populate graphs for those sampling locations where fewer than five samples were collected because those locations had insufficient data to create a representative trend line. If a chart could not be generated, the data points are still available to review on the website. And, in the event that additional samples are collected for these locations, EPA will add more charts to this website.

For each metal, the trend graphs illustrate that concentrations are significantly lower than the Recreational Screening Level (RSL). The specific RSLs for each metal are posted on the right side of each trend graph. RSLs, established by EPA, are health-based concentrations for each metal based on exposure during recreational use.

The RSLs for both soil / sediment and surface water are based on recreational scenarios in which an adult or child hiker/camper is exposed to surface water and sediment.

For surface water, the recreation-based screening levels assume that the adult or child would receive all of their daily water intake (2 liters/day) from the river over a continuous 64 day period. For sediment, the recreation-based screening levels are based on a hiker/camper that may become exposed to sediments alongside the riverbank over a continuous 64-day period. These RSLs are conservative, representing levels that are not expected to cause adverse effects over an extended period of time, based on a continuous 64-day exposure. These screening criteria represent the most conservative scenario for recreational users.

The trend graphs shows the concentrations of dissolved metals rather than total metals, based on the pre-event and post-event data. Concentrations are expressed in the dissolved, rather than the total, form of the metal because the dissolved is a better predictor of harm to human health and the environment.

For samples with metal concentrations that were too low to detect, EPA plotted the Method Detection Level (MDL) value onto the trend graph. Please note that the trend graphs do not specify which values are MDLs. Please also refer to the analytical data tables to determine the exact values of the sample results.

Sampling results for metals that are close to or at the MDL show variability that is not seen for results at higher concentrations. This may be due to laboratory instrument sensitivity and/or variations in sampling. EPA notes that this variability may be observed in some of the trend graphs as a series of lows and highs.

#### **What data was used to create the trend graphs?**

The trend graphs were created from pre-event and post-event data that show the conditions of the Animas and San Juan watersheds. Each sample was analyzed for 24 metals, including arsenic, cadmium, lead and mercury.

Pre-event samples were taken prior to the plume's arrival to establish a baseline for water quality comparisons. Data for pre-event sampling were posted on August 10, 12, 13, and 15, 2015.

#### **What do the sample results show?**

Both sediment and water quality samples have been reviewed and compared to RSLs for metals.

The concentration of metals in all samples collected are below surface water, soil / sediment RSLs.

Based on the comparison of pre-event data with data collected over the past two weeks, the pre-event sampling data show that concentrations for all 24 metals in surface water are trending toward

pre-event conditions.

EPA's long-term concern is the effect of metals deposited in sediments in the entire watershed and their release during high-water events and from long periods of recreational use. EPA is establishing a longer term watershed monitoring strategy for the surface water and sediments that have been affected by the Gold King Mine spill to identify potential long-term impacts working closely with State and local officials.

To view the data map: <http://www2.epa.gov/goldkingmine/data-gold-king-mine-response>

The agency plans to post additional charts to show the concentrations of all 24 metals in surface water over the next weeks. Please let me know if you have any questions.

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Rebecca A. Russo

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